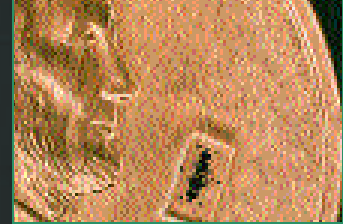
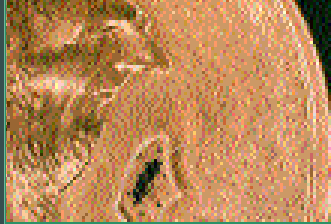


## SENSORS AND RELATED TECHNOLOGY



Sensors are becoming essential for today's commercial products, which must have increasingly sophisticated capabilities. Automobiles need crash sensors to detect a car's deceleration and deploy the air bag long before the driver and passenger move toward the dashboard. Videocameras rely on motion sensors to help reduce jitter and stabilize picturetaking. And in security cameras, infrared sensors allow the detection of heat patterns given off by the human body in nighttime conditions. Advanced sensor technology has allowed U.S. companies to develop new commercial products that can make a significant contribution to our Nation's economy.

### Today's Market

The 1993 U.S. sensor market reached \$4 billion, and it is expected to grow significantly by the year 2000. The worldwide sensor market was \$7 billion in 1993 and, like the U.S. sensor market, will grow substantially by the year 2000, possibly reaching \$12.7 billion. One of the largest segments of the worldwide sensor market is passenger car sensors, whose share has grown from \$2.63 billion in 1991 to \$4.7 billion in 1996. In 1997, 47 million sensors are expected to be installed worldwide, with a large portion in the United States.<sup>1</sup>

### Tomorrow's Opportunity

BMDO has funded some of the most innovative sensor research and development for its ballistic missile defense systems. As one of the first programs to be implemented by BMDO, sensor activities have focused on improving sensor materials and developing innovative approaches to track multiple targets with multiple sensors in a noisy environment. Developers, in turn, have converted their BMDO sensor products to such commercial uses as astronomic, automotive, and environmental applications. The following section describes a few examples of the commercialization activities of BMDO-funded companies.

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<sup>1</sup>All marketing figures cited from the staff of *Sensors*.